FIG.1 PRIOR ART

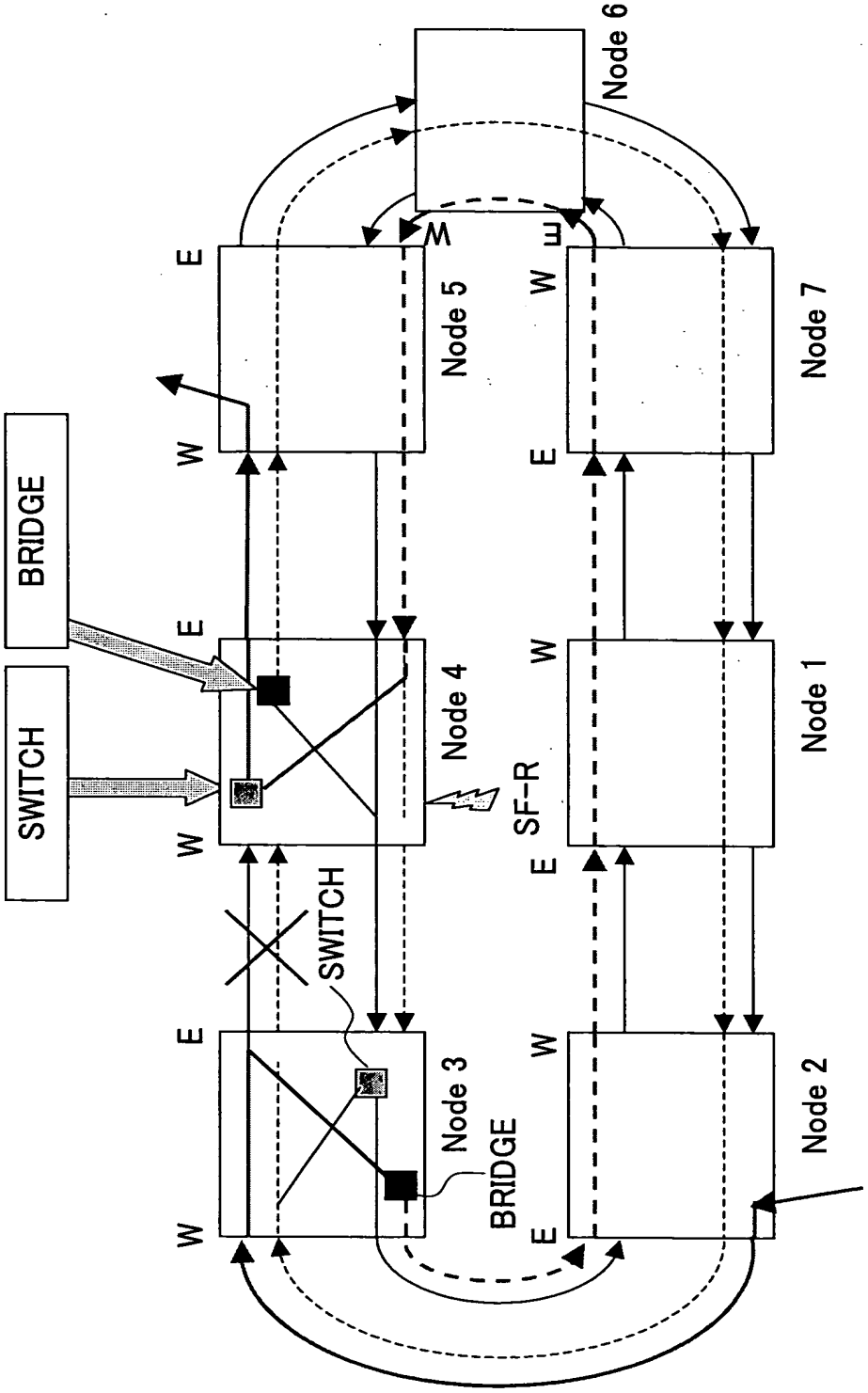


FIG.2 PRIOR ART

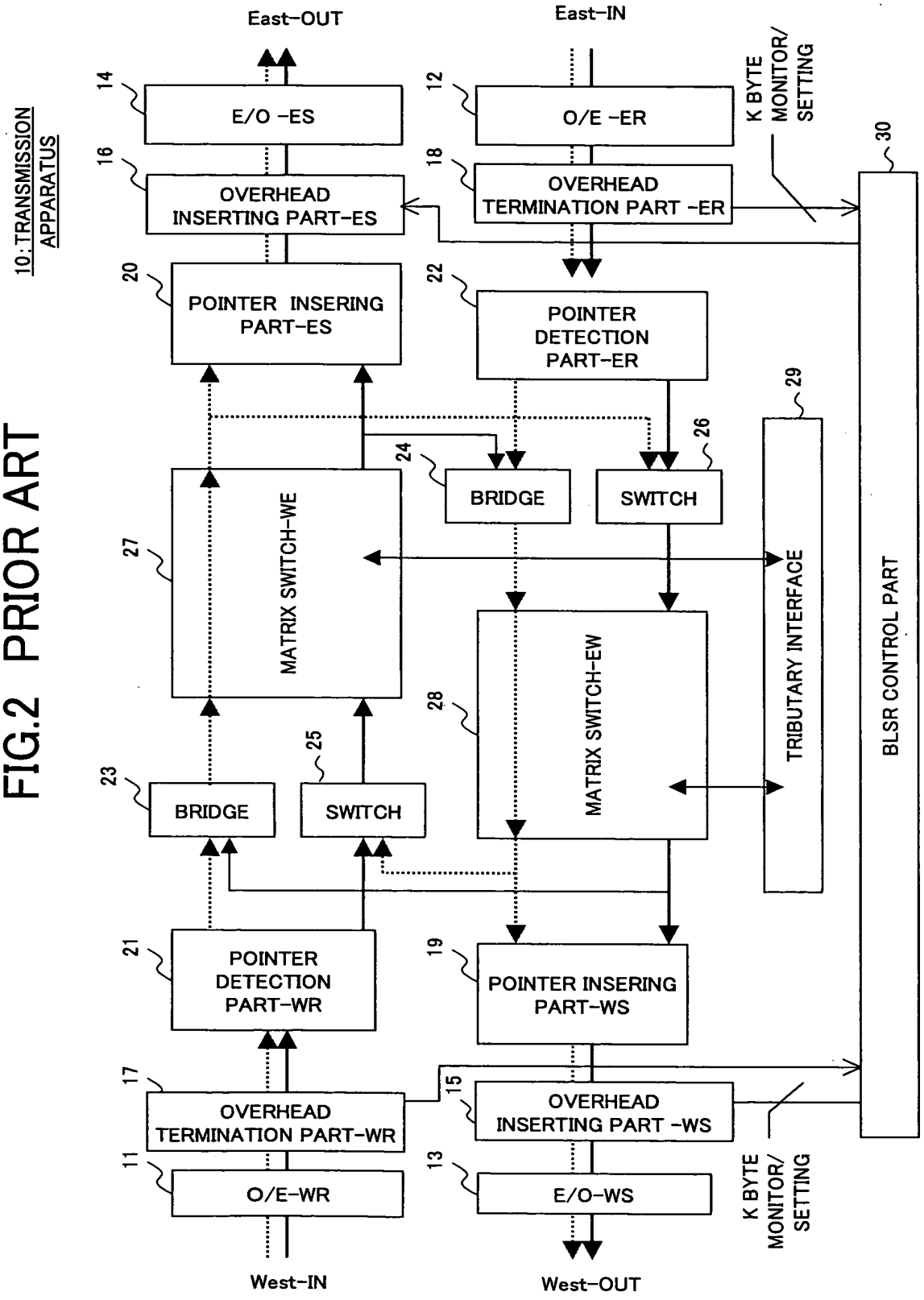
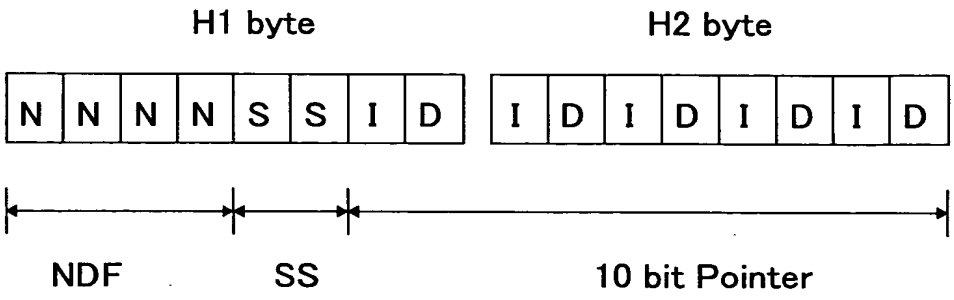


FIG.3 PRIOR ART



I : Increment Indication
D : Decrement Indication
N : New Data Flag
S : SS bits

FIG.4 PRIOR ART

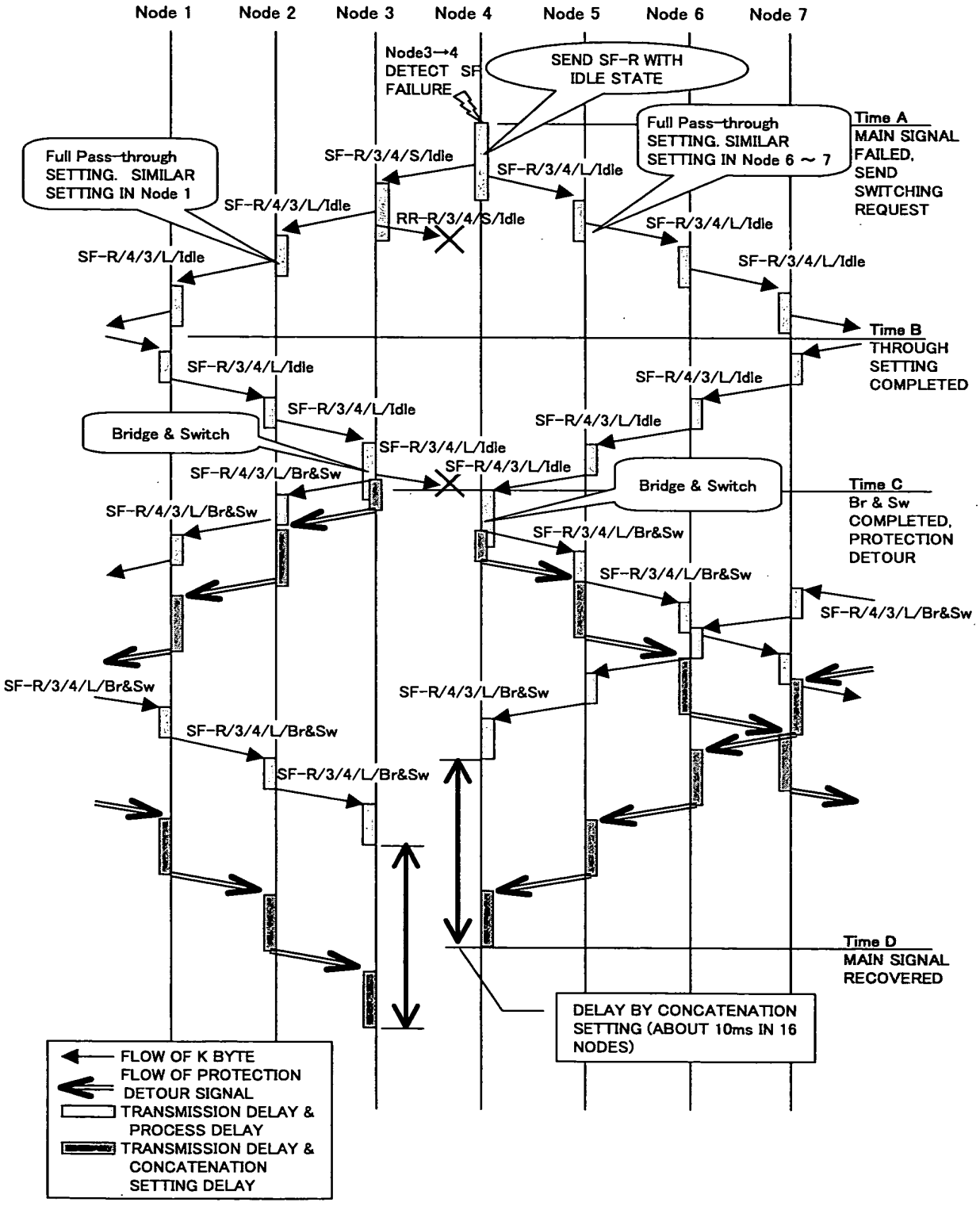


FIG.5A PRIOR ART

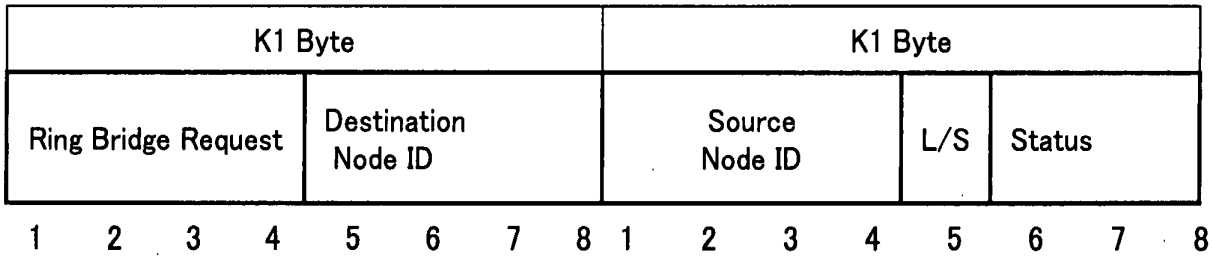


FIG.5B PRIOR ART

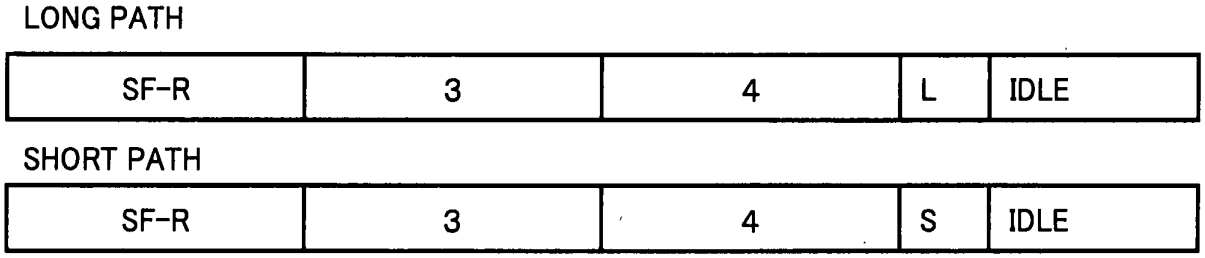


FIG.6

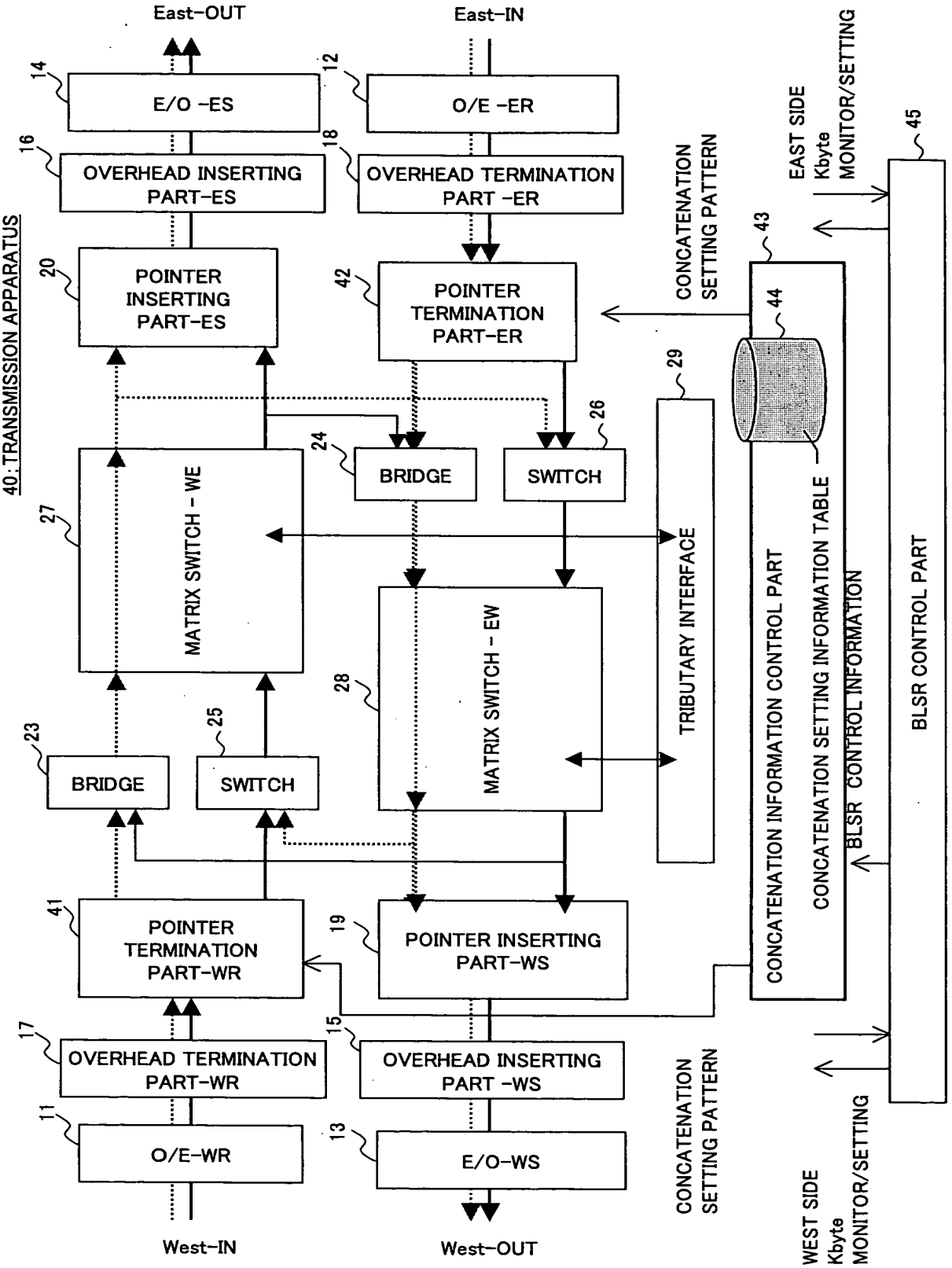

40: TRANSMISSION APPARATUS
East-OUT
East-IN
E/O -ES
O/E -ER
OVERHEAD INSERTING PART-ES
OVERHEAD TERMINATION PART -ER
POINTER INSERTING PART-ES
POINTER TERMINATION PART-ER
BRIDGE
SWITCH
MATRIX SWITCH - WE
MATRIX SWITCH - EW
TRIBUTARY INTERFACE
BRIDGE
SWITCH
POINTER TERMINATION PART-WR
POINTER INSERTING PART-WS
OVERHEAD TERMINATION PART-WR
OVERHEAD INSERTING PART -WS
O/E-WR
E/O-WS
West-IN
West-OUT
CONCATENATION SETTING PATTERN
CONCATENATION INFORMATION CONTROL PART
CONCATENATION SETTING INFORMATION TABLE
BLSR CONTROL INFORMATION
BLSR CONTROL PART
EAST SIDE Kbyte MONITOR/SETTING
WEST SIDE Kbyte MONITOR/SETTING
CONCATENATION SETTING PATTERN
14
12
16
18
20
42
43
44
45
29
24
26
27
28
23
25
41
19
17
15
11
13

FIG.7

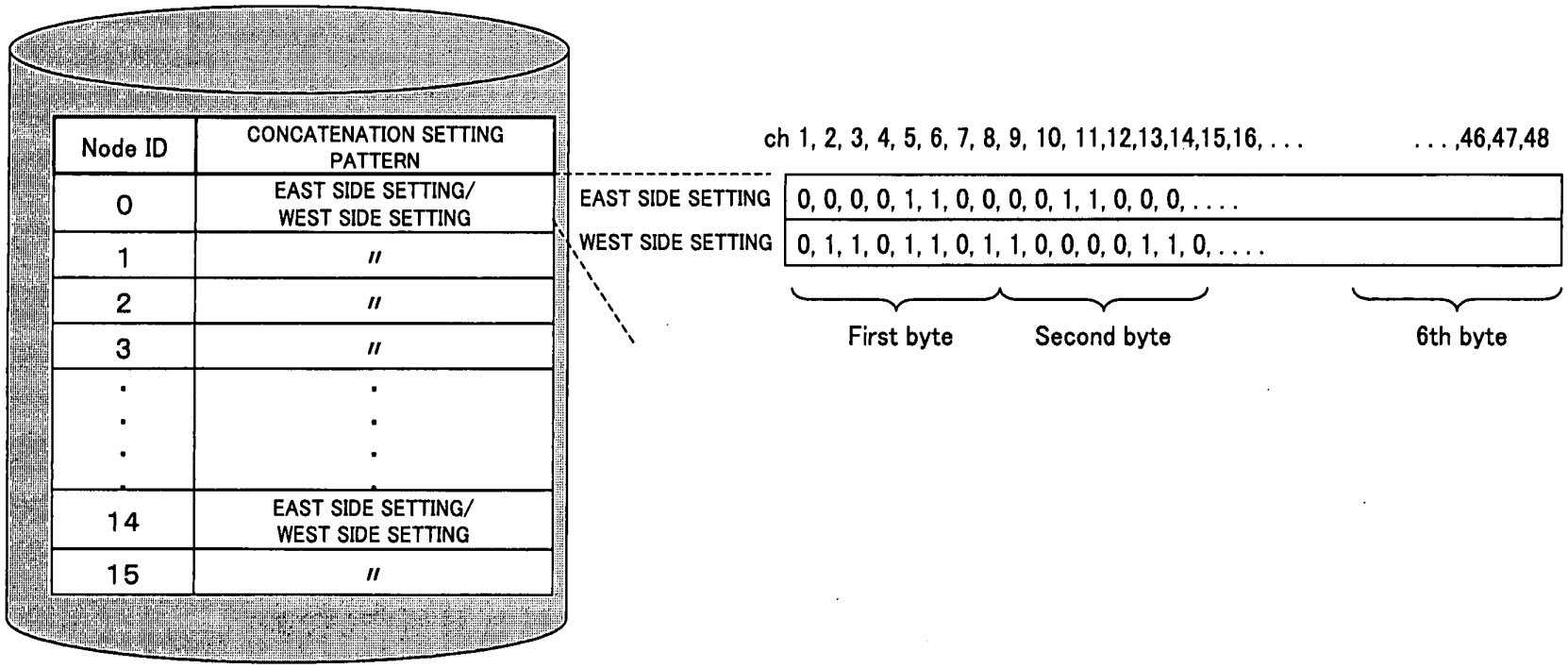

Node ID
CONCATENATION SETTING PATTERN
0
EAST SIDE SETTING/ WEST SIDE SETTING
1
〃
2
〃
3
〃
14
EAST SIDE SETTING/ WEST SIDE SETTING
15
〃
ch 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11,12,13,14,15,16, . . .
. . . ,46,47,48
EAST SIDE SETTING
0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 1, 1, 0, 0, 0, ...
WEST SIDE SETTING
0, 1, 1, 0, 1, 1, 0, 1, 1, 0, 0, 0, 0, 1, 1, 0, ...
First byte
Second byte
6th byte

FIG.8

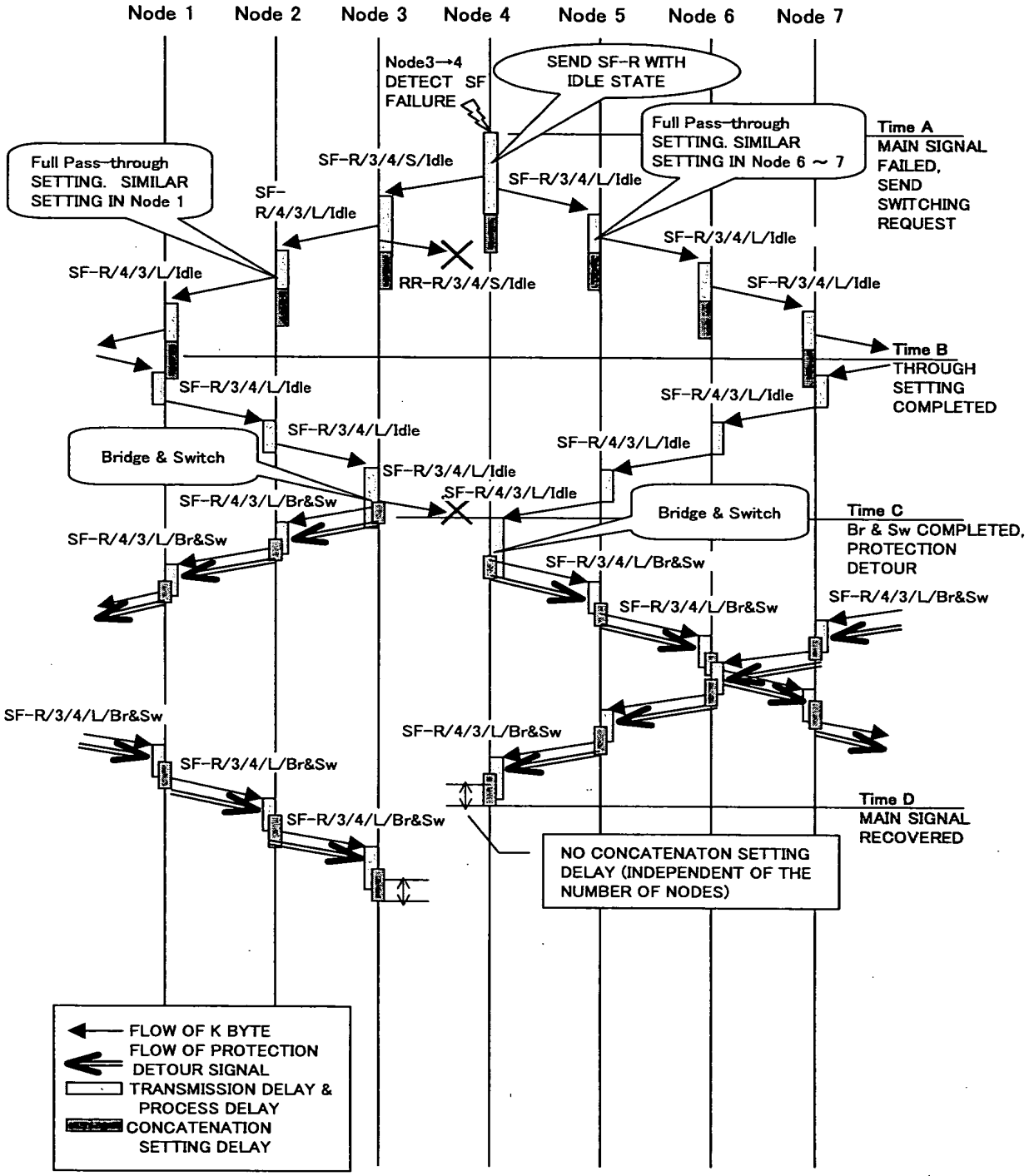

Node 1
Node 2
Node 3
Node 4
Node 5
Node 6
Node 7
Node3→4 DETECT SF FAILURE
SEND SF-R WITH IDLE STATE
Full Pass-through SETTING. SIMILAR SETTING IN Node 1
Full Pass-through SETTING. SIMILAR SETTING IN Node 6 ~ 7
Time A
MAIN SIGNAL FAILED, SEND SWITCHING REQUEST
SF-R/3/4/S/Idle
SF-R/3/4/L/Idle
SF-R/4/3/L/Idle
RR-R/3/4/S/Idle
Time B
THROUGH SETTING COMPLETED
Bridge & Switch
SF-R/4/3/L/Br&Sw
Time C
Br & Sw COMPLETED, PROTECTION DETOUR
Time D
MAIN SIGNAL RECOVERED
NO CONCATENATON SETTING DELAY (INDEPENDENT OF THE NUMBER OF NODES)
FLOW OF K BYTE
FLOW OF PROTECTION DETOUR SIGNAL
TRANSMISSION DELAY & PROCESS DELAY
CONCATENATION SETTING DELAY

FIG.9

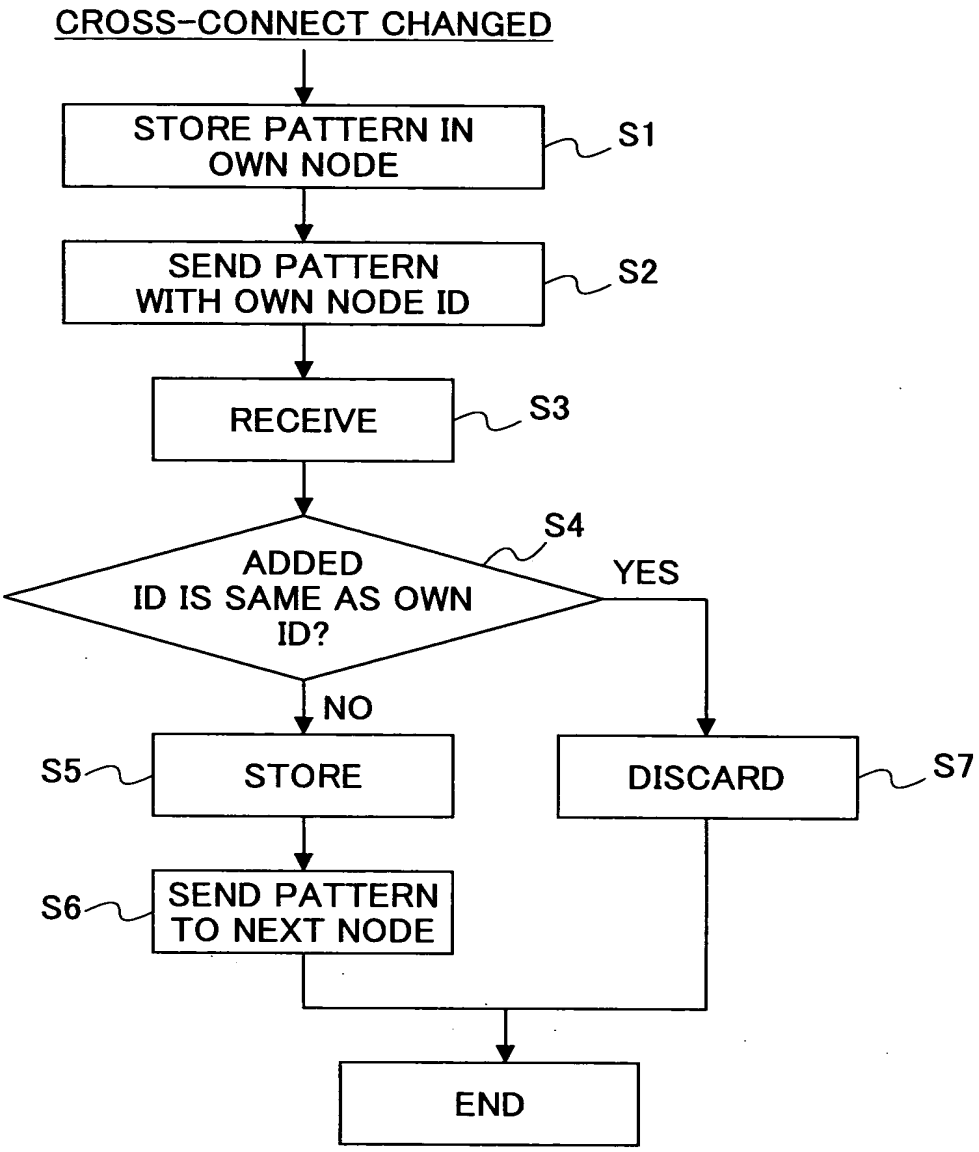

CROSS-CONNECT CHANGED
STORE PATTERN IN OWN NODE
S1
SEND PATTERN WITH OWN NODE ID
S2
RECEIVE
S3
S4
ADDED ID IS SAME AS OWN ID?
YES
NO
S5
STORE
DISCARD
S7
S6
SEND PATTERN TO NEXT NODE
END

FIG.10

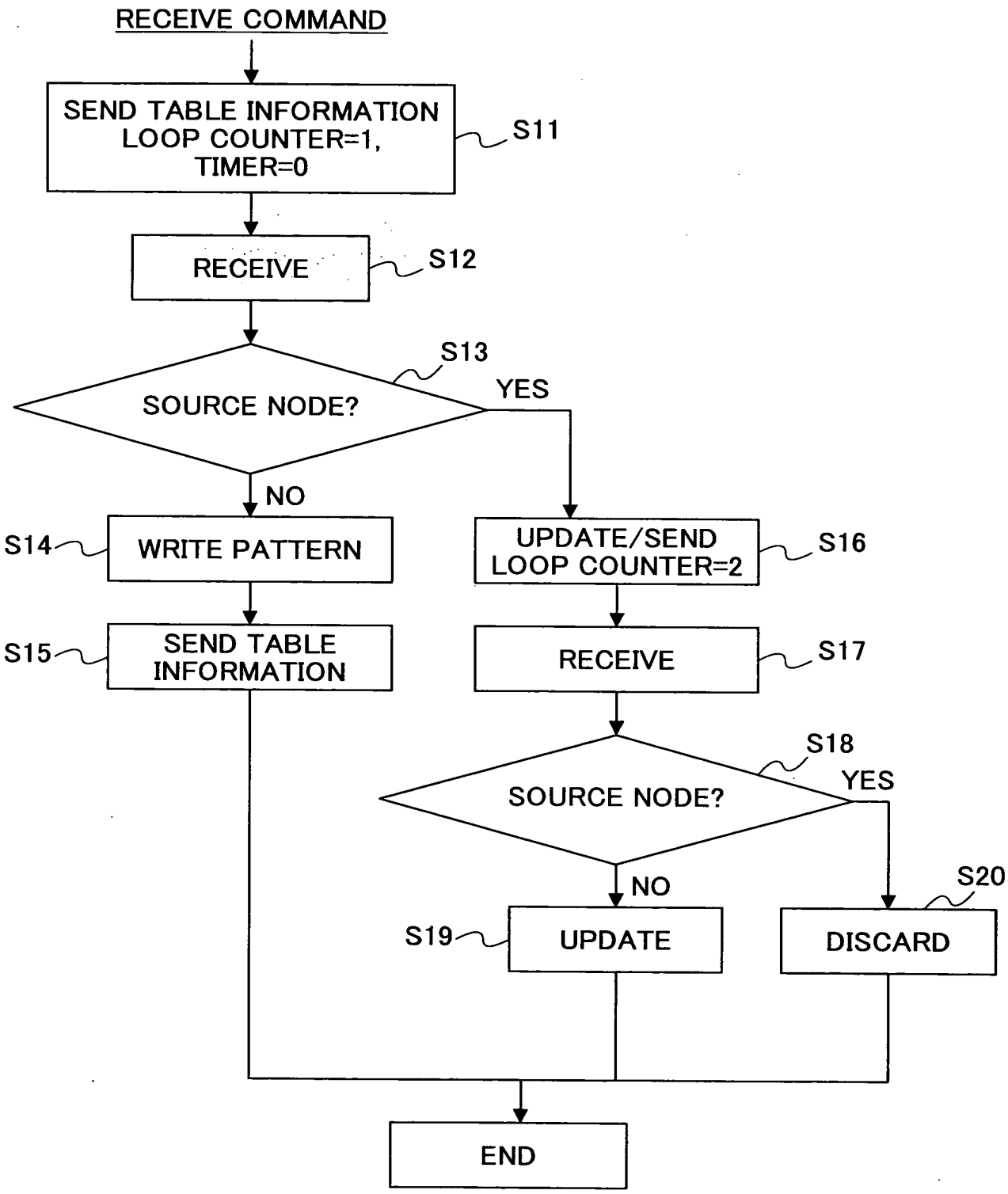
AU4 in STM1

RSOH	A1	A1	A1	A2	A2	A2	J0	Z0	Z0
	B1			E1			F1		
	D1			D2			D3		
AU Pointer	H1	H1*	H1*	H2	H2*	H2*	H3	H3	H3
	B2	B2	B2	K1			K2		
MSOH	D4			D5			D6		
	D7			D8			D9		
	D10			D11			D12		
	S1	Z1	Z1	Z2	Z2	M1	E2		

Undefind Overhead Byte

* Concatenation Indication
H1*=1001XX11
H2*=11111111

FIG.11


RECEIVE COMMAND
SEND TABLE INFORMATION
LOOP COUNTER=1,
TIMER=0
S11
RECEIVE
S12
S13
SOURCE NODE?
YES
NO
S14
WRITE PATTERN
S15
SEND TABLE
INFORMATION
UPDATE/SEND
LOOP COUNTER=2
S16
RECEIVE
S17
S18
SOURCE NODE?
YES
NO
S19
UPDATE
S20
DISCARD
END